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Sheet	1	of	3
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Application Number	10/681,032
Filing Date	Oct. 7, 2003
First Named Inventor	James C. Weatherall
Art Unit	2859
Examiner Name	Shrivastav, Brij B.
Attorney Docket Number	1640-006

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
B		US- 3,589,177	06/29/1971	Merlo	
		US- 3,722,288	03/27/1973	Weber	
		US- 4,087,798	05/02/1978	Thom et al.	
		US- 4,234,844	11/18/1980	Yuki	
		US- 4,263,511	04/21/1981	Hirschberg	
		US- 4,433,286	02/21/1984	Capots et al.	
		US- 4,493,039	01/08/1985	Gregory	
		US- 4,651,100	03/17/1987	Janes	
		US- 4,652,829	03/24/1987	Safinya	
		US- 4,740,753	04/26/1988	Glover et al.	
		US- 4,881,025	11/14/1989	Gregory	
		US- 4,912,982	04/03/1990	Yuki	
		US- 5,124,662	06/23/1992	Downing et al.	
		US- 5,260,665	11/09/1993	Goldberg et al.	
		US- 5,266,913	11/30/1993	Chapman	
		US- 5,296,810	03/22/1994	Morich	
	US- 5,334,941	08/02/1994	King		
	US- 5,341,100	08/23/1994	Taylor		
B		US- 5,648,038	07/15/1997	Fathi et al.	

[illegible]

Date	
Considered	

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 2


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		Number-Kind Code <sup>2</sup> (if known)			
b		US- 5,689,189	11/18/1997	Morich et al.	
		US- 5,757,187	05/26/1998	Wollin	
		US- 6,049,207	04/11/2000	Petropoulos	
		US- 6,081,118	06/27/2000	Kaplan	
		US- 6,194,898 B1	02/27/2001	Magnuson et al.	
		US- 6,255,816 B1	07/03/2001	Robitaille	
		US- 6,255,824 B1	07/03/2001	Barbara	
		US- 6,375,875 B1	04/23/2002	Paulauskas et al.	
		US- 2002/0005725 A1	01/17/2002	Scott	
		US- 2002/0149377 A1	10/17/2002	Hefi et al.	
2		US- 4,370,611	01/25/1983	Gregory et al.	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner Signature		Date Considered	7/11/07
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First Named Inventor

James C. Weatherall

Art Unit

2859

Examiner Name

Shrivastav, Brij B.

Attorney Docket Number

1640-006

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
B		NORBERT GENG AND LAWRENCE CARIN, "On the Low Frequency Natural Response of Conducting and Permeable Targets," IEEE Transactions on Geoscience and Remote Sensing, Vol. 37, No. 1, Jan. 1999, pp. 347-359	
B		Brett D. Culbertson et al., "Sensitivity and Optimization of a High-Q Surface Dielectric Motion-Sensor Transducer," IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, Vol. 45, No. 5, Sept. 1998, pp. 1303-1313	

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Signature

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